

**Abstract**

In order to detect and classify objects in a relatively small obstruction-filled space (e.g. underneath a vehicle), a sensing method and apparatus incorporating the use of at least two carefully selected transmission frequencies is provided. In embodiments where the transmission frequencies are radio frequencies, the sensing apparatus can be considered and analysed as a short-range radar system. Alternatively, if the transmission frequencies are acoustic, the sensing apparatus can be considered and analysed as a sonar-based system.